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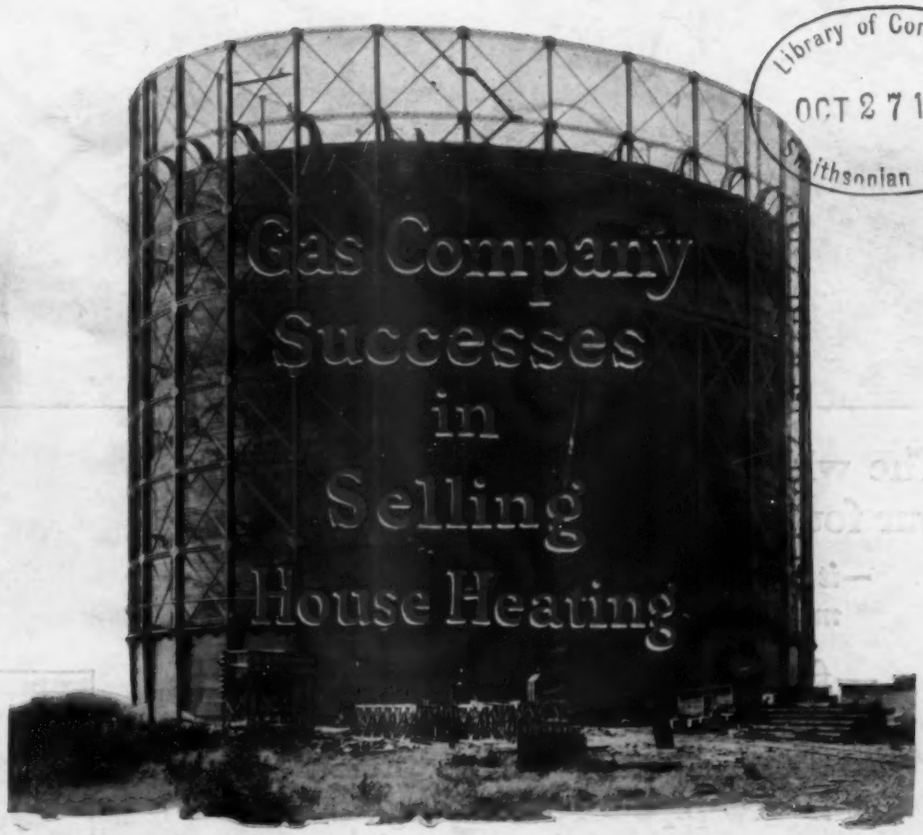

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Pages 29 to 46

HOW representative Gas Companies are successfully selling house-heating; their organizations, policies and sales methods; the complete findings of an extensive investigation.

Complete in this issue.

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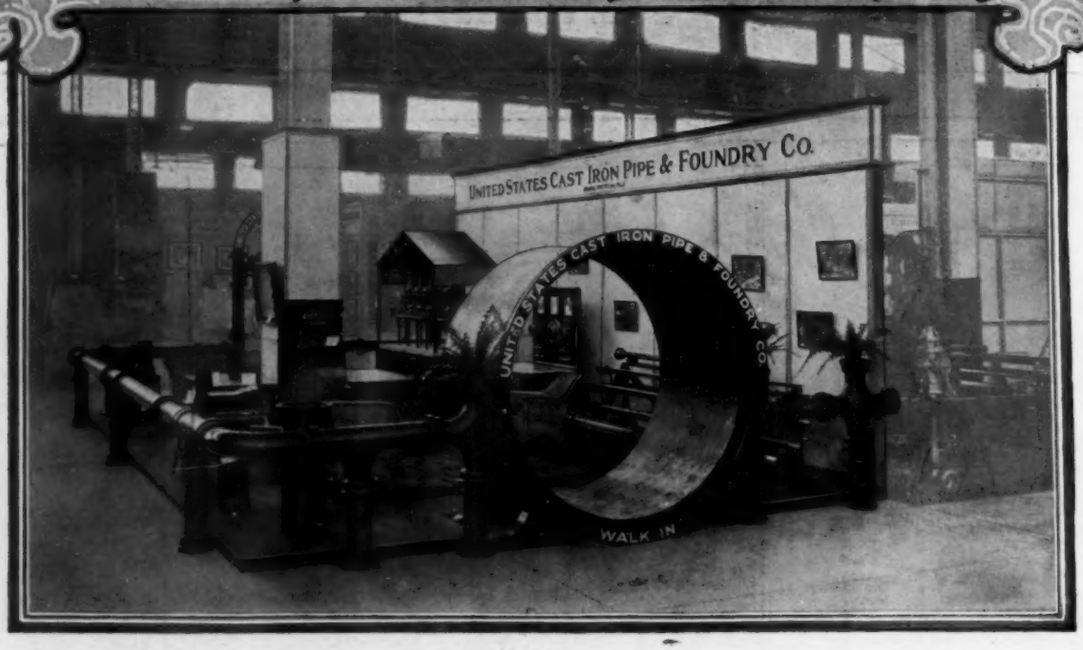
AT THE SESQUICENTENNIAL
U. S. C. I. P. EXHIBIT
Booths 1&4~Section 1~Group E~Machinery B'ld'g



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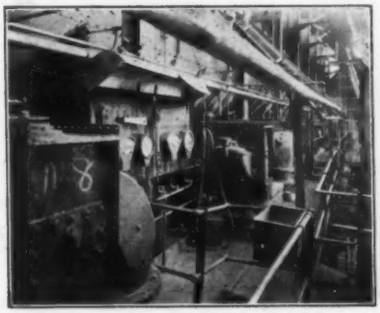
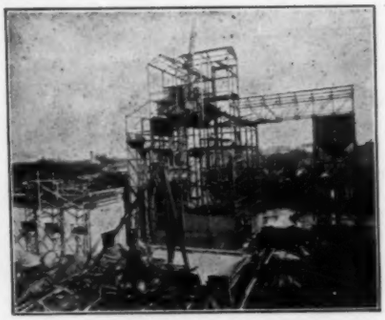
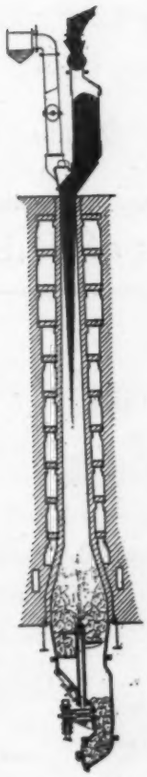
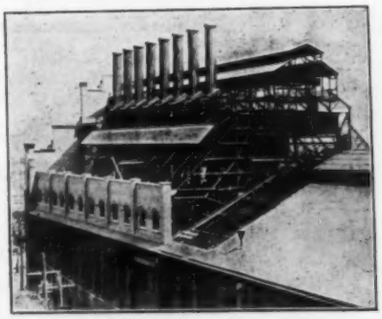


Collecting Mains Platform



New Plant Under Construction





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SIXTY-SEVENTH YEAR

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Vol. 125. No. 21. NEW YORK, OCTOBER 23, 1926. Whole No. 3603.

Industrial Gas Sales*

Their bearing on general gas company operation

C. E. Paige

Vice-president Brooklyn Union Gas Co., Brooklyn, N. Y.

WE have here many men with minds, no two exactly alike. Fortunately, these men and these minds are activated by a common objective—to sell gas.

The purpose of this paper is to discuss industrial gas sales and their bearing on general gas company operation.

To review—a gas company is a maufacturing enterprise, plus service.

There is little left to say to define service as a word. There still remains quite a bit to do to make the word effective.

Theories and policies of rendering service are quite adequate in gas company management. To maintain high standards set by our policies, there is needed constant effort and discipline. No discipline in the sense of punishment for wrongdoing, but discipline which teaches the right way to do a thing and the right time to do it.

Service Ideals Expressed in Deeds

A gas company's conception of service ideals has been expressed in deeds, rather than in words. We now realize that if our deeds are what they should be, we must use words to tell about them, especially if such practice will lead to increased sales. We are entitled to advertise our service if it is worthy. Confident in our conviction that there is none better, our industry is now conducting an advertising enterprise which will bring to every home and to every industry an acquaintance with the possibilities of gas as a fuel.

We have a growing appreciation of what industrial gas sales mean to the gas company. From the gas company management viewpoint, industrial business needs more experts. Young men with ambition and energy may embark on a professional career here, and not simply hold down a job. The prospect is alluring, both for the industrial gas salesman and for the gas company. In fact, to appreciate the magnitude of the field, it is only necessary to know that industrial gas sales have increased by 1,000 per cent in the last ten years. Success involves brains and work, because more and more, highly trained technique will be required as the business develops.

Only a few years ago, very few companies had men especially assigned to industrial work. With their facilities, they did a good job, but they lacked training, and there was not so very much knowledge available anyway.

Educational Work

The gas companies are getting together to provide facilities for men to learn industrial gas engineering. The American Gas Association has just completed a course of training in this subject. Universities and colleges are co-operating in courses covering gas utilization. Periodical conferences of industrial gas engineers in various sections of the country help the engineer to get started and provide a convenient opportunity for an exchange of ideas between the older men. Manufacturers of appliances are lending their laboratory facilities to research, with the result that continual improvement is shown in the application of gas to industrial fuel use. Experimental installations are recommended by sales engineers and approved by company management. Gas companies are liberally supporting such efforts.

To some extent, each company is working out its own solution of the problem, especially to meet the conditions which appeal to them as local. The effort is more individual than co-operative.

This convention, and this section, particularly, ascertains what problems are common to all, with

* Presented at the Wednesday meeting, Industrial Gas Section, A. G. A. Convention, Atlantic City, October 13, 1926.

the result that we are much nearer unanimity in what should be done than we have been before.

But you can not agree here to do something, and go back home and do something else, or do nothing. Not if the gas business is to make the most of the industrial fuel opportunity. You may fight here for your idea, but you must support majority opinion.

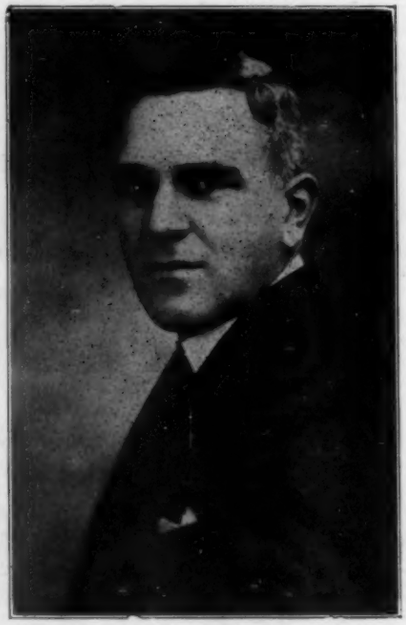
The Duty of the Salesman

The industrial gas salesman has a duty to perform in the furtherance of the industry. It is his obligation and his opportunity to keep his management informed of industrial developments and activities. He may feel that he lacks encouragement, he may not be summoned for the express purpose of providing him an opportunity to tell the officers of his company what glowing prospects exist in his department. It may be necessary for him to exercise some ingenuity, and certainly some persistence, to get the chance to express his ideas.

Remember, "only the game fish swims upstream."

It should be some satisfaction to him that company management appreciates original ideas. To be sure, he must seek his interviews at convenient times. But, anyway, in the long run, management will recognize indications of ability as being worthy of compensation.

I speak of company management rather broadly, because the man in management is not the same man in every company organization. But the industrial gas salesman in any organization knows to whom he should address himself if he would accomplish his purpose.



C. B. Paige

Gas Not a Monopoly

There still remain in the gas company management men who, apparently, even yet, have failed to realize the rapidly developing competitive aspect of our business. For many years, in its early history, the gas company was untroubled by competition of any sort. The gas company of today is called a monopoly, but it is no such monopoly as it was before it met the necessity for competing with other fuels. From the fuel standpoint, we have a competition which should spur us on to greater and greater accomplishment.

Gas company management must appreciate that industrial gas application must be developed by advertising. Advertising of industrial gas and industrial gas appliances in trade journals has shown results. Advertising gas in local newspapers has a direct effect in interesting local industry, and a valuable indirect effect of keeping the public at large acquainted with the marvelous adaptability of this fuel.

At a recent utility convention, I met a woman member who was surprised to learn that gas was even now sold in large volume for lighting. When I told her that gas today furnished the most effective and economical light, she was frankly skeptical.

When I told her that the gain in gas sales of 1924 over 1923 was greater than the total yearly sales when gas was used almost exclusively for lighting, she was amazed.

And yet, there are thousands of people who, like her, think of the gas business as being afflicted with pernicious anemia.

Gas Must Be Advertised

Gas management owes it to the industry to advertise, that the world may know the virility and magnitude of this great industry.

Last year the chairman of the Industrial Section made a report as chairman of the Policy Committee. It was read here a year ago. Many of you who are industrial gas salesmen heard it read, and nodded your heads in solemn affirmation. What did you do with it after you got home?

There were probably officers of companies who heard it, and who would have been glad to have used it if their industry gas salesmen had impressed its importance upon them.

There were doubtless officers of many companies at the convention who did not hear this report read, but received a copy of it. Quite conceivably, they passed it over lightly, reasoning that their situation was in the hands of their industrial gas salesmen, and if this report contained anything which affected management, they could depend on their industrial gas salesmen to bring it up.

If you are an industrial gas salesman, I recommend this report to your attention, but more particularly to your action. It is better now than it was then.

If you are an officer of a company and represent management interested in the growth of sales, I recommend even more earnestly, that you read this report of Mr. Cauley. It provides you with definite suggestions as to just what you can do to improve your situation.

Conclusion

Summing up, I believe that new business men and industrial gas engineers must impress the management of gas companies constantly with the importance of this part of our business.

I believe that management must take more time to appreciate the efforts put forth by industrial gas salesmen and the problems to be met.

Management must support the association in industrial gas advertising and in industrial gas research.

Management, more than department heads, must see that customer service produces customer satisfaction. This responsibility cannot be delegated.

A report of last month dealing with the report of last year, to which I have referred, indicates that while much has been done along the lines recommended, much remains.

The future of industrial gas sales depends more than anything else on what the gentlemen in this section do about it. Will you do your part?

House Heating*

Details of a New England company's experience

E. L. Woods

OUR first house heating installation was made during the winter of 1916-1917. The customer practically insisted on heating his house with gas. We were inclined to discourage him but he was sold on the idea of heating with gas and we finally let him try it out. This was a conversion job and did not prove satisfactory.

The next installation was in a church. This church had been cut off from its supply of heat, which it had been buying from across the street. The committee in charge of finding a means of heating the church did not consult the gas company. Instead, they became convinced that the Rector system was the proper one for the purpose and installed it in 1917.

Condensation in Flues

As we all know, one of the greatest problems in gas heating is the flue gases due to the condensation if the flue pipes are long. In the system as it was installed insufficient precautions were taken to meet the corrosive action of the condensation, and corrosion became excessive. The vacuum on the system became less and less and the cost of heating higher and higher, mounting with each heating season. This system was taken out in 1924 and an oil burner installed, demonstrating that it is very bad policy to make any heating installation that is not as perfect and as efficient as it can be made.

About 1921 the cast iron low pressure boiler was introduced. Our gas was selling at $1.35 net, but we experimented by heating an 11-room house with three bath rooms. This house had about 1,100 square feet of radiation and the results obtained showed the fallacy of making trial installations. When a customer is using a trial installation he does not assume responsibility. He really has nothing at stake. If he has been sold the installation and really wants to make it a success, he does assume responsibility. It is to his interest to keep the cost as low as possible, and he exercises more care in that direction.

High Rate Detrimental

In the winter of 1922-23 we heated a 22-room house of three floors. Gas was still $1.35 net. We did a good job with a cast iron hot water boiler. However, the rate was high and the job was thrown out, an oil burner now doing the heating. Again it was demonstrated that a trial installation does not pay.

About two years ago, believing that our rates were low enough to make house heating practical, we began to give the house heating field more serious attention. In making installation we used solenoid valves in connection with the room thermostat because we consider the overhead chains and motor bad practice. The chains are far too easily disturbed. We use a low water control on all installations and now have what we believe is an ideal system.

We use Bryant boilers exclusively because we started with Bryant boilers as industrial boilers in 1916. We specialize on one type of equipment because it is better business to do that and because we can render better service when so doing.

How the Customer Is Sold

We seek an interview with the customer and show him that we have reasonable rates and that the installation costs are comparable. We consider the life of an oil burner as about five years and are sure that the operating costs of gas are a little lower than those of oil. However, it is hard to get all the costs and accurate costs of oil burning. The customer may think he is considering all the costs but the actual total is almost certain to be higher than he figures.

Only the best magnesia covering is used on the basement pipes and the insulating work is turned over to the Johns-Manville Company. We use Minneapolis thermostats because we can get good service on them in our city.

* Presented at the October Meeting of the New England Gas Association.

Hoffman valves we consider a vital part for the successful operation of the job because of the intermittent propensities of the boiler. The gas boiler has only ten to fifteen gallons of water against say fifty gallons in a coal boiler. Besides, the gas boiler is on and off. The steaming is more intermittent than in the case of a coal boiler. The No. 2 Hoffman valve is, as far as we know, the only vacuum valve on the market with thermostatic control. It is a valve that has proved very satisfactory with gas-fired boilers and we insist that they be used when we make installations.

Interconnections Discouraged

We discourage interconnections with the old coal boiler because such an installation does not look well and because it is not usually practical. There are very few who now want interconnections.

All the house heating work is done through a small organization, and one of the most important individuals of this organization is the supervisor who stands between the sales department and the servicing department.

During the first year of seriously selling house heating we made 25 installations. Now we have 75, and that it is best to sell the installations and not put them in on trial is indicated by the fact that, with a single exception, every installation is giving entire satisfaction, and in the case of the exception it is no fault of the gas company. The gas house heating system is one of the few applications of gas that is perfect. It gives more consistent satisfaction than gas does when applied to any other use, provided the installations are properly made and the customer is really sold before the installation is made.

Mills Rule Used in Calculations

We use the modified Mills rule because, though a more accurate method may be better for new house installation, where the material of which the house is built can be known, it is different in the case of old houses. We are selling equipment at list prices and give the plumbers the trade discount. We encourage the plumbers to install gas boilers. However, only high grade plumbers can make installations and the ratio of high grade plumber to the total number of plumbers in any community is none too high.

We make installations ourselves and supervise the work of the plumbers. Nothing but two inch service pipes are used.

House Heating and Water

The house heating load is desirable because it demonstrates another application of the fuel. It also increases the hot water heating load, because along with the boiler installation there usually goes sooner or later an automatic method of heating water.

Our installations are not yet numerous enough to affect the total load curve but the studies we have made on the boilers in use indicate that the peak of the heating load is between six and eight in the morning and again at night. In other words, it does not come on during the plant peak load. Neither does it interfere with the domestic load. We have had very little pressure trouble in house heating.

We make service part of the sales talk and are selling many installations to widows because of this service. We have two men on call twenty-four hours a day.

Gas Companies Participate In Exposition

Three companies have five booths at Brooklyn show

THIS year the Brooklyn Chamber of Commerce made use of the Grand Central Palace in Manhattan in which to hold the Brooklyn Exposition so as to secure a more central location in the Greater City than Brooklyn armories afforded and in order to better come in contact with the out of town visitors to New York who are interested in Brooklyn products.

The public service utilities of Brooklyn, being an intimate part of the business, industrial and domestic life of Brooklyn, naturally had their part in the show although they were demonstrating service with energy supplied by lines not operated by them.

Combined Exhibit of Three Gas Companies

The three gas companies of brooklyn were associated in one combined exhibit occupying almost the entire north side of the Grand Central Palace. The facade of the beautiful Grecian pergola used as an office and recreation room bore the names of The Brooklyn Union Gas Company, The Kings County Lighting Company and The Brooklyn Borough Gas Company, thus indicating a gas appliance display typical of Brooklyn from the East River to Coney Island down by the sea.

For a single homegeneous display this installation

was probably the most comprehensive ever shown. as every phase of current gas utilization was typified here in some measure. Pictures of installations in use showing the actual appliances on the floor formed a background of proof certifying to the value of the

Booth Showing House and Space Heating Appliances

exhibits being demonstrated by expert gas men who had qualified in the specialties of which they were in charge.

Two Main Sections

The display was separated by the reception room into two large general parts, one chiefly pertaining to industrial and commercial service and the other to residential or domestic service although there were some appliances in each section that might find use in the other.

Each section was arranged in bays by means of which groupings of appliances suitable for kindred industries were exhibited in the manner most likely to appeal to the interested visitor, and at the same time permit the use of a demonstrator who had specialized in these industries.

Industrial and House-Heating Appliances

The exhibit began with burners, special fires and devices applicable to industry in general. Portable bakers' ovens, japanning ovens, gas steam boilers, restaurant ranges and special appliances for heavy duty work in food production carried the interest of the visitor along to metal melting furnaces, forges, annealing furnaces, hardening furnaces and other high temperature furnaces were shown. Gas steam boilers and space heating devices brought one to the point where interest developed into house-heating and kindred matters of domestic applications of gas. Central points in both steam and hot water were shown along with thermostatic controlling systems that relieve the home owner of having to worry about the time and temperature in the operation of his house-heating plant. Radiators, garage heaters, and room heaters of the most approved types were placed where they could best attract the eye and show comparative use in relation to the central plant systems.

The domestic range came in for a very extensive display and was representative of the best products of several well known gas appliance manufacturers.

The appliances of the household laundry, including hot water heaters, laundry stoves and clothes dryers were shown.

Appliances for the Kitchen Demonstrated

The appliances for the kitchen were demonstrated by the Home Service Divisions of the three associated companies, Miss Soule and Miss Grant representing The Brooklyn Union Gas Company, Miss Emmons representing The Kings County Lighting Company and Miss Pidgeon The Brooklyn Borough Gas Company. Tht demonstrators' work was alternated among the three home service groups. Pies, cakes and pastries were prepared and baked so that the observing visitors could get the benefit of the processes of preparation as well as viewing the operation of baking. After the dainties were cooked, they were distributed to the onlookers who appreciated the exquisite cookery produced by a good gas range in the hands of a good cook.

The gas appliance exhibit represented a rather large problem in installation, for the period permitted for such work is always limited to two or three days, but vast as the exhibit was, it was there on time and ready for the first visitor as soon as the doors opened, thus exemplifying the modern idea of gas service.

Brooklyn residents attended the show in large numbers and seemed rather proud of the fact that this great show of their home town was blazoned in letters of light on a street beyond the borough limits.

Booth Showing Industrial Appliances

Selling House Heating*

A discussion of basic merchandising factors involved

Brewster Beach

THROUGH the 100 years of the life of the gas industry, remarkable contributions have been made to engineering science, to human welfare. The industry has been built upon a solid foundation of conservatism to which many in the industry today attribute its present strength. To others within the industry, and to many outside of it, the conservative policy of the industry as a whole signalizes a critical period in its life.

There are many indications that the industry stands at the crossroad between new progress and slow decline. To almost every industry there comes a critical period in its life at which the upward curve representing volume of business begins to level out. This phenomenon has been the subject of much study by business research experts.

Those who preside over the corporate destinies of large organizations, have found themselves actually able to counteract this seeming economic law, not by increased activity along the same old lines, but by discovering new uses for existing product and new markets, and also by the invention of new devices or what might be termed the addition of profitable specialties to their line. This is the condition that the gas industry faces today, and therein lies our great opportunity.

House-Heating Opens Great Field

In the very midst of fundamental economic changes, we find ourselves upon the threshold of another gateway to a new and greater progress, the use of gas for the heating of residences and other buildings. Over our mental horizon appears a vision of the use of gas for central heating, tremendous in its possibilities for development, capable of limitless expansion, fraught with interesting problems pointing the way to a revitalization of our industry.

Our industry through mutual cooperation within its own ranks and through its national association, has brought house heating with gas to a point where the attention of the whole country can be focused upon us. We have a subject which will intrigue the interest and arouse the curiosity of millions of people.

Yet, many of us, (this does not necessarily apply 100 per cent by any means) despite the increasing growth of this new gas service and its most infinite possibilities, remain skeptical or unconvinced. We are faced with a two-fold selling problem—selling ourselves and telling the world.

First Be Sold on House Heating

Unless we gas men can ourselves envisage the commercial possibilities of gas househeating, then we can hardly expect to leave a lasting impression on the public. For the pubblic, taken by and large, is utterly unconscious of the service gas can render; is blind to the vision of its future, woefully ignorant even as to its present benefits and applications.

The average home owner has little or no knowledge of what gas can do for him. This is strikingly illustrated by the fact that many owners who have already enjoyed the benefits of gas heating, criticize us for not having brought the utilization of this new fuel to their attention before.

Let us remember then, there are 10,000,000 domestic users of manufactured gas. Then let us realize that there are approximately 26,000,000 homes in the United States, and that of these homes, more than 17,000,00 are inadequately heated with present equipment, while 50,000 are entirely unheated. Now add to this the fact that 160,000 new homes are going up each year, and we have a slight idea or what the market for gas heating represents.

Growth Will Be Gradual

Irrespective of the most intensive sales effort inaugurated by any gas company in selling gas for househeating, the development or growth of the business is going to be gradual. This is best illustrated by the fact that it has taken 40 years for the heating industry to sell modern steam and hot water heating systems to only 3,000,000 owners of homes out of a total of 26,000,000. Therefore if it has taken the heating industry 40 years to sell 9 per cent of our home owners a modern heating plant, how long will it take the gas industry to sell 3 per cent? I believe that when a gas company sells 1 per cent of their domestic consumers they have made a very excellent showing, and I think at the end of five years of intensive selling effort that more than 3 per cent of the domestic consumers will be enjoying this new service.

Consider the vast undeveloped market, translate this locally in your own community. Think of the service that gas, and only gas, can offer—its wide spread benefits, its good-will breeding possibilities, its intimate daily contact with customers, its superior advantages as a fuel. Weave those around so interesting a subject as heating homes, a subject vital to health, uppermost in the mind of everyone for six months in every twelve, and we gain some idea of the sales possibilities of this method of heating.

Presenting This Picture

How shall we present the picture to the prospective user in so convincing a manner that a sale of gas service will result?

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* Presented at the Gloucester Summer Sales Conference.

We should lift the whole subject to a higher plane removed from the competitive arguments or other types and other forms of heating. Let us show the customer, not only what gas heating will save him in care and worry but the actual value he will receive through the ownership of a constant, dependable and completely automatic heating service under the supervision of a publicly regulated utility corporation.

Let us show him that he will then use the cleanest, most convenient and efficient of all fuels; that he will receive it in small pipes from the holders of his gas company, burn it only in the exact quantity demanded by room temperature, and pay for it only after he has used it.

Now, we can add that he is dealing with a utility corporation of established reputation and with an industry that is governed by the exact science of gas engineering. Consequently, he will be able to know in advance exactly what it will cost him with a further division of the cost throughout every month of the heating season. He can go into it with his eyes open and can expect to get just what is promised him. And, in addition to all this, he will be relieved of the responsibility and drudgery of caring for his heating system, will eliminate the storage of liquid and solid fuels, and at the same time gain complete freedom from ashes, soot, coke, odor and noise, and all that this means —increased happiness and healthy contentment for all the family. Is there any better selling proposition than this at any price?

Good-will of Heating Trade

One of the most important factors in a gas heating campaign is the good-will of the heating trade. Whether the heating man gives active support to a sales program or not, depends on a variety of local conditions and to the degree to which he can be enthused with the idea. This, however, is of little moment if he can be brought into sympathy with the plan in a broad way so that you can at least enlist his passive support rather than incur, as sometimes is the case, his enmity.

It has been found well worth while to send out informal invitation cards to the heating trade in the territory, asking their attendance at a dinner to discuss the important subject of gas heating. The dinner can be staged in a local hotel or popular gathering place, where there will be on exhibition on the floor of the dining room, a fully equipped sample of the heating boiler.

If your company has decided to institute an active sales and advertising campaign, complete details of such can be explained in terms of how such effort will help the contractor to increased heating business. Experience shows that establishing an organized contact with the heating trade is to get off on the right foot in a house heating campaign.

Meeting With Architects and Builders

A meeting with selected architects and builders following the meeting with the heating contractors, and handled in the same manner, is many times productive of good results. Here the chief object is to impress them with the advantages of gas heating for its own sake and in relation to its effect on increased sales and rental value of real display.

You can have a boiler on display for inspection, furnish guests with descriptive literature and have authoritative new building statistics for presentation. There is also the opportunity to explain question of rates, if a special heating rate is in effect or contemplated, and to eliminate the boiler operation and safety features in addition to the company's sales policy and advertising program.

Direct By Mail Advertising

The importance of well organized direct-by-mail advertising cannot, in my opinion, be over-emphasized. It should be based on a good mailing list rather than a haphazard selection of customers. Lists will naturally divide themselves as follows:

1. New homes under construction which have been sold to owners.

2. Old homes of the type, size and cost (taking the owner's financial standing in the community into consideration) as to be well adapted for replacement for gas heating.

Pipe Your Home for Cold Weather Comfort

Winter's on the Way. . . . Coldest in Years. Make sure of your Comfort. Modernize with Gas.

Think what a warm, snug home you'd have this winter with Gas to heat it—no worry about fuel shortages. Think of the cheer of evenings spent in the firelight of a gas radiant heater—the convenience of heating water by gas — of cooking with gas, of lighting your home with mellow, eye-comforting gas light.

New and Old Houses completely piped for gas and labor-saving appliances installed

On Easy Payment Terms

Ask about our "Get-Ready-for-Winter" Offer, September Only! Call.....

(Your Name and Address)

"If it's done with heat—you can do it better with GAS"

A.G.A.-633

An Interesting House Heating Ad Emphasizing the Idea of Piping the Fuel Into the Home

3. Architects and builders who are both themselves prospects and the influencers of prospects.
4. The heating trade.
5. Selected list of your company officers and employees.
6. Special lists developed by officers and department heads, based on personal acquaintance and friendship.

Consistent Weekly Advertising

Next in importance is consistent weekly newspaper advertising over a given period of time, carefully hooked up with the direct mail work just outlined. Best results are usually obtained through organized co-ordination between the direct-by-mail effort, salesroom displays and local salesmen canvassing prospects and calling on the heating trade.

The value of the "Model Home" in the heating campaign plan is another and very important factor. The advantage of this method of promotion is that it furnishes a place to exhibit an actual and practical installation of gas heating which may be under operation. It focuses public attention on the house containing the heating equipment, and the model home becomes a living showroom for the display and demonstration, not only of the heating equipment but of other gas appliances.

All Employees Should Co-operate

Last and by no means least, for I think this is a subject of primary importance, is the question of the support given by the whole rank and file of the gas company organization. For the purpose of organizing the support of its employees, the vice-president of one company issued the following bulletin:

"We wish to call attention to the 'heat your home with gas' campaign which the company is conducting, and to enlist the active support and co-operation of every member of our organization. The purpose is twofold.

"Service to the communities in which we operate and the establishment of better living conditions which come with the use of gas heating through the elimination of all the annoyance, labor and worry of a coal fired heating system.

"An increasing revenue from the sale of gas. This enables us to maintain our operating forces at maximum efficiency, develop and expand our service and continue to earn the necessary return upon the large investment in plant equipment.

"For the purpose of encouraging the heating of houses by gas, we have established a special heating rate".

Gummy Deposits in Mains and Meters*

Essential requirements for complete decomposition determined

George E. Wagner

Madison Gas and Electric Company, Madison, Wisconsin

DURING January 1925 the Madison Gas and Electric Company had an unusual number of D.R. gas meters. A number of these meters were opened and found to contain a deposit which had caused the diaphragm to tear. The deposit was similar to the deposit we had found at about the same time in a few mains. When the meters were opened, the deposit was fluid but after it had been exposed to the air, it hardened to the appearance and consistency of varnish making its removal from the diaphragms and meter case very difficult.

Trouble of this nature had been experienced by numerous gas companies and has been studied by a special committee of the American Gas Association, R. L. Brown, chairman. The action of the deposits in our meters was similar to that described by the committee who showed that the deposits were highly unsaturated hydrocarbons which took up oxygen very easily. They had found also that these hydrocarbons combined with each other and formed compounds still more complex, and when so altered were not readily soluble in the solvents ordinarily found in gas or tar.

The information given in this paper has been gathered largely from the report on this subject by the special committee of the American Gas Association and a report by Prof. Kowalke of the Chemical Engineering Department of the University of Wisconsin.

The two hydrocarbons found in water gas which are the chief causes of gummy deposits are indene and styrene. Prof. Kowalke examined the deposits in our meters and expressed the opinion that they

* Presented at the Wisconsin Utilities Association Gas Convention, Fond du Lac, Wisconsin, May 14, 1926.

were mainly indene and styrene and were probably caused by the incomplete decomposition of the gas oil in the water gas set. He suggested that a study be made of the "light oils" such as benzene, toluene, xylene, and solvent naphtha, produced in the water gas set under various operating conditions.

Use of Naphtha Drop

Since the deposits were affected by oxygen it was advisable to discontinue immediately the addition of air to the gas at the exhauster which was added for reviving the oxide in the purifiers. It was also suggested that we add drop by drop, "naphtha cut" into the distribution mains at the pressure house. Naphtha cut is a by-product from the manufacture of Blau gas.

The addition of air to gas for reviving the material in the purifiers naturally increased the free oxygen which would combine with the unsaturated hydrocarbons in the gas drips and be a contributing cause to the formation of viscous drip oils. We concluded that while the presence of oxygen was beneficial to the purifying material its detrimental effects on the deposits in the mains and meters more than offset those advantages. The admission of air was therefore discontinued.

The addition of naphtha cut was made to increase the amount of condensible vapors in the gas not subject to gum formation. Naphtha cut dissolves indene and styrene and carries them to the drips. Analysis of the drip oil subsequent to the addition of naphtha cut showed an increase in the low boiling point hydrocarbons.

Gummy deposits were rarely heard of in the days of 22 cp. and 600 B.t.u. gas because there was sufficient low boiling point "light oil" to keep all gum forming substances in solution. It, therefore, seemed reasonable that anything which we might do to increase the low boiling point light oil content in our gas would help to solve our difficulty.

Complete Conversion of Carburetting Oil Desired

When oil is sprayed into the carburettor of a water gas set the result desired is complete conversion of liquid hydrocarbons into permanent incondensable gaseous hydrocarbons. This condition is never completely realized in practice but may be closely approached. It has been shown by several investigators that when a petroleum hydrocarbon such as gas oil is heated the products of destructive distillation or carbonization as the temperature is increased are in sequence:—(1) paraffines, (2) olefines, (3) acetylenes, (4) higher homologs of benzene, (5) xylenes, (6) toluene, (7) benzene, (8) naphthalene, (9) anthracene, (10) lamp-black. Thus as the temperature of distillation approaches a certain critical point the condensable products are more and more unsaturated and have more and more the property of forming "addition products" which may be complex in structure, easily condensed and difficult to control. This is particularly true of the complex compounds referred to as the "higher homologs of benzene" which include indene and styrene. Upon further increase in temperature the less complex compounds of the benzene group are produced along with desirable compounds such as methene and ethylene, etc. At still higher temperature the oil is completely decomposed into hydrogen and lamp-black.

It should be remembered that all of these products are formed simultaneously in a water gas set but certain temperatures are more favorable than others to produce the permanent gases and hydrocarbons of higher vapor pressure that do not easily condense. The ideal condition in gas making is to produce the permanent gases and hydrocarbons of higher vapor pressure that do not easily condense. The ideal condition in gas making is to produce a gas from which nothing condenses out. The nearest approach to the ideal is to make condensation difficult. If condensation occurs, the condensate should be fluid and permanent or stable in chemical behavior. Because of its high vapor tension and chemical stability, benzene stands first among the desirable condensable hydrocarbon vapors usually found in manufactured gas; toluene, xylene, solvent naphtha follow in the order named in desirability.

Factors Governing Destructive Distillation

The destructive distillation of an oil in a water gas set depends upon, (1) temperature, (2) rate of oil input, (3) fineness of division of oil, and (4) on the intimacy of contact of the oil with the hot checker work. Laboratory tests have been made to determine the best temperatures and rates of oil input to produce the desirable decomposition but the results of these determinations cannot be applied directly unless the laboratory conditions can be duplicated. It was, therefore, decided to determine the character of the condensable hydrocarbon vapors in the gas leaving the works under various operating conditions.

To study the character of the condensable vapors in the finished gas a sample from the outlet of the purifiers was made to pass through an oil scrubber in which all condensable vapors were removed. The oil scrubber used in these tests consisted of a piece of 2-inch pipe, 4 feet 6 inches, with smooth pebbles from ¼ to ½ inches in diameter. A petroleum oil known as "straw oil" and having a boiling point of over 250 degrees F. was allowed to flow from an overhead reservoir over the pebbles at the rate of 50 c.c. per cubic foot of gas. The gas passed upward through the scrubber. The oil on leaving the bottom of the scrubber flowed into a seal flask and was then put into a storage can. The gas flowing from the supply main into the scrubber was measured by a wet test meter and regulated to six cubic feet per hour. The volume of oil used per test varied from 2.1 gallons to 2.64 gallons and the volume of gas from 151 cubic feet to 250 cubic feet. The period of absorption varied between 12 and 24 hours so as to obtain a representative sample of gas.

Fractional Distillations of Light Oils

The hydrocarbon vapors or "light oils" absorbed by the straw oil were next removed by steam dis-

tillation. Then the "light oils" were separated by fractional distillation according to A. S. T. M. standards into groups boiling over respectively, (1) between 20 and 100 degs. C, (2) between 100 and 120 degs. C, (3) between 120 and 140 degs. C, (4) between 140 and 160 degs., and (5) between 160 and 200 degs. C and their volumes were measured. In the fraction boiling over under 100 degs. C would be found practically all of the benzene and some toluene; in the fraction boiling between 140 and 200 degs. C would be found styrene (boiling point 146 degs.), and indene (boiling point 182 degs..) It is obvious that the fraction boiling over under 100 degs. C should be as large as possible and the fraction boiling over between 140 and 200 degs. C as small as possible. It has been observed that in those plants where so many gummy deposits have occured in meters the benzene fraction is about 60 per cent by volume of the "light oil," and the fraction boiling over between 160 and 200 degs. C is about 3 to 8 per cent of the "light oil."

The temperature in the carburettor and superheater were measured by thermocouples which had been carefully checked with a standard at the Chemical Engineering building. The gas makers in observing temperatures, prior to this investigation, read only the average temperatures in the superheater during the first run after filling the generator. After we had made a number of tests they were instructed to read the highest and lowest temperatures at the base of the carburettor and at the base of the superheater on each cycle.

Results of Tests

Tests number 1 and 2 showed a benzene content of 4 and 10 per cent respectively and the fraction boiling over between 160 and 200 degs. was found to be 64.05 and 49.95 per cent respectively. It seemed apparent that the oil sprayed into the carburettor was not effectively gasified. The oil spray used in the water gas set at that time consisted of a pipe with a single opening in the spray head. In order to obtain dispersion of the oil it was decided to replace this oil spray head with one which had six orifices. In order to admit the oil into the carburettor at the same rate it is obvious that the combined area of the six orifices had to be practically equal to the area of the single orifice in the original spray head. The first tests made with the new spray head showed a benzene fraction of approximately 61 per cent and the higher boiling point fraction about 12 per cent as compared with a benzene fraction of 10 per cent and a higher boiling point fraction of almost 60 per cent in tests 1 and 2.

The 11-foot water gas set in use when these tests were made was equipped with back-run and the carburettor had seven rows of checker brick. It was considered advisable to increase the checker bricks in the carburettors to fifteen rows. While this change was being made we operated a 10 inch set which was not equipped with back-runs. Since on these sets equipped with back-run, the time of oil input must necessarily be short, we made some tests to determine the effect, if any, of the longer period of oil admission. That water gas set also was equipped with an oil spray which had six orifices and the test showed practically the same results as the previous test.

After the carburettor of the 11-foot set had been recheckered with 15 rows of checker brick, another test was made. This showed approximately the same benzol content but a slight decrease in the higher boiling point fraction.

Using New Orifices in Spray Head

We then replaced the orifices in the spray head with new orifices which had a smaller opening. In order to obtain the same rate of oil input it was, of course, necessary to increase the oil pressure. On account of the increased pressure and the smaller openings the oil was dispersed into finer drops and it should have been decomposed more completely. As we had anticipated the test made under those conditions showed another slight increase in the benzene content but approximately the same higher boiling point fraction.

It was then decided to increase the operating temperatures in the carburettor and superheater from 1350 degs. to 1450 degs. When operating at an average temperature of approximately 1450 degs. F. in the carburettor the test showed a benzene fraction of over 60 per cent and the higher boiling point fraction of less than 5 per cent. It, therefore, seemed logical to conclude that the carburettor should have fifteen rows of checker brick and be operated at a temperature approaching 1450 degs. Higher temperatures produced lamp-black.

To determine the extent of condensation of "light oils" in the holder and the mains, tests were made on the gas taken from the street mains at the outlet of the holder and at the Chemical Engineering building approximately one and one-half miles away. The outstanding fact of these tests was that the higher boiling point fraction becomes smaller and smaller as the distance from the plant is increased.

Condensation in Mains

A study of the probabilities of condensation in the mains and services with various contents of the different "light oil" fraction is interesting and valuable. Condensation can take place only when the partial pressure of the vapor in a gas mixture is equal to or greater than the vapor tension of the liquid at that particular temperature. If the partial pressure of the vapor in the gas mixture is less than the vapor pressure of the liquid condensation is impossible. In other words, the farther the vapors are removed from the condition of saturation, the less will be the probability of condensation. A careful study of this condition showed that at a temperature of 41 degs. F., such as gas mains would reach during the winter months, the content of the higher boiling point fraction in our gas at the beginning of this investigation was so large as to reach about 132 per cent saturation and the benzene fraction was only about 1.35 per cent saturation. It was obvious that this condi-

tion would cause condensation of the highest boiling point fraction without the presence of the benzene fraction to keep it in solution.

Conclusion

Summarizing the above, it is obvious that in the desirable gas for distribution the high boiling point fraction of the "light oils" should be low and the benzene fraction always adequately high to keep the high boiling point fraction in solution if it should condense. In order to obtain this condition it is necessary to approach complete decomposition of the oil in the water gas set. The results of our tests showed that the essential requirements for the most effective decomposition of the oil are in sequence of their importance: (1) Fineness of division of the oil; (2) Temperature; (3) Intimacy of contact, and (4) Rate of oil input.

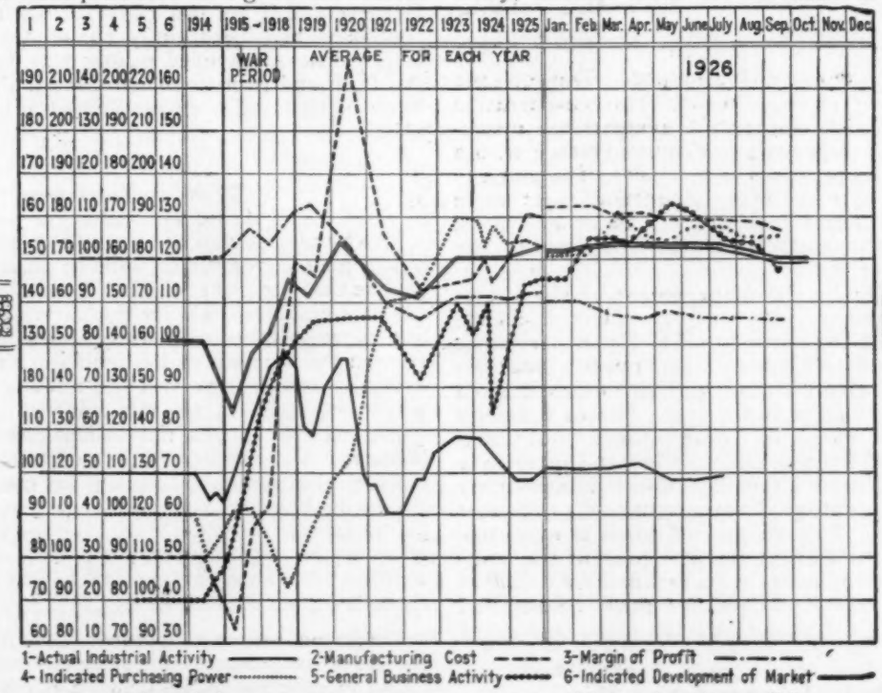
While it is obvious that the temperature in the carburettor and superheater must be approximately correct, it was very evident that the greatest improvement was made by improving the dispersion of the oil.

Business Continues on High Level

Farm situation, real estate buying, shift in population factors in market development

L. W. Alwyn-Schmidt

FALL business has opened most promisingly, and some manufacturers apparently are inclined to take a very hopeful view of the situation. This is in line with the opinion of almost all market authorities who have promised us a good fall season. From all that can be gathered from press reports, official documents and private information, it becomes more and more evident that the restlessness which has characterized the market situation during the summer has been less economic in origin but has its explanation in a strong political undercurrent centering around the agricultural markets of the Middle and Northwest. As this restlessness persists and is carried into the fall business it is bound to be a feature to be reckoned with. It will not, most likely, subside until the elections are over. In a country which takes its politics as seriously as the United States it is only natural that political considerations should enter the field of market economics. True, politics stand but little chance against the operation of hard economic laws, but political activi-



(Continued on page 526)

Education Among Employees*

Good public relations necessitates good employee relations

Elizabeth Sweeney

Empire Gas & Electric Co., Geneva, N. Y.

WE all are agreed that the major problem of Public Utilities today is to win the friendliness of the public, its confidence and co-operation. We know that unless we are able to establish a relationship of general confidence in the honesty and efficiency of our industry, we can neither hope for nor expect its development to the point of highest usefulness. Our problem is to win those of our customers who are hostile, unfriendly and indifferent over to the definitely friendly ranks. And here the importance of what we term "Public Relations" figures prominently. GOOD public relations—means pleasing customer contacts and good, friendly employee relations.

Employee Education is an ambiguous term and is open to many interpretations. It can assume that phase of providing instruction along technical lines which is, without doubt, a thoroughly worthy scheme on the part of any company. But I firmly believe that the company which can give to its employees a vivid and true conception of the standard of service which it, as a company, wants and intends to furnish will meet with the greater degree of success.

Complete Employee Co-operation Necessary

The complete co-operation of employees is necessary in winning public support. This co-operation can be gained only through a sympathetic understanding of the company's problems together with a knowledge of its purposes and policies. The starting point must be with the management and must begin with the chief executive, himself. In other words, the management must "sell" the company to the employees.

A specific idea by the management of the job to be done is necessary. This involves, of course, a code of high ideals on the part of the chief executive since the attitude and ambitions of employees almost invariably reflect those of their superior officers. Such instruction of employees along the line of company policies can be accomplished only through their learning to know the management. It is not always easy to gain this intimate knowledge and it is absolutely the duty and obligation of the management to render all possible help. The officers and those in executive positions must to a great extent represent the management to the employees and a real understanding of the company's aims and policies must be instilled in them by the chief executive if the claim is to carry down through the ranks.

Methods of Accomplishing This

There are many ways in which this can be accomplished—First, of course, one assumes that the declared policies are actually practised. And this is a safe assumption, since the very life of the utility industry is dependent upon public attitude. And public attitude is the result of company policies as they affect financing, rates, fairness, willingness to serve and customer contacts. A company's public relations really consist of the separate and individual contacts of its 10,000 or 20,000 customers, as the case may be. And public opinion is usually formed by a customer's experience with one employee or group of employees for the company is judged by the attitude of its representatives. In like manner, does the individual contact of an employee with the company executive nearest to him, shape that employee's opinion of the company.

So, unless the management can thoroughly inculcate in company executives a complete understanding of its ideals, the "Vision" can never be gained by employees—either men or women. But once given that vision, success must follow.

The public is intelligent, though often unreasonable. But the best antidote for unreasonableness is fairness and if we can convince our customers that the desire and intention of the company are to play fair, we have travelled a long way toward winning the faith and friendliness of the people, which is the basis of that much coveted Good Will that we talk about.

Effect on Employees

The employee who has a true conception of the job which his company is anxious to do, who is made to realize that the gas and electric industry has no place for any employee who is not alert, accommodating and courteous, becomes doubly valuable. Just as we women recommend and defend the shops which we enjoy patronizing, so will the informed employee in his social contacts be able and willing to answer questions and correct misconceptions regarding the industry. The worker who can be convinced of the sincere intention on the part of his company to serve the public honestly and well, ceases to harbor radical or socialistic views. One of the most effective weapons for fighting this evil, then, is ours for the wielding and there can be no more powerful advocate than the cynic convinced.

Employee meetings present excellent media for becoming acquainted with company policies through talks by officers. A knowledge of the men, themselves, is also gained through such talks regardless of the subjects upon which they may speak. The chief executive should hold regular meetings with his superintendents and company officers at which

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* Commercial Section, Empire Gas & Electric Company, Women's Section.

As The Journal Views It

REFRIGERATION WITH GAS

All gas men, who were fortunate enough to have had the opportunity of attending the 1926 convention at Atlantic City and of visiting the remarkable show that was arranged by the manufacturers on Young's Million Dollar Pier, were particularly attracted by the exhibits of gas-operated refrigerators. In fact, it appeared that no single gas appliance attracted as much attention at the 1926 exhibition as did these machines. Furthermore, notices that have appeared in the daily press also testify to the great interest that the general public is manifesting in these new gas appliances.

There seems to be no doubt but that the use of gas for refrigeration will soon become markedly popular. Both from the standpoint of the gas industry and of its customers, this new appliance of gas possesses decided advantages. The gas industry will gain an additional domestic load which comes in its maximum at a time when the industrial load is small. The summer refrigeration load can go very far towards counterbalancing the large winter load, and if this were the only advantage that refrigeration has for the gas industry, it would indeed be welcomed for it alone.

As far as the consumer is concerned, he has in the gas-operated refrigeration an appliance in which he can place the utmost of confidence. As is generally known, it works on the absorption system and has no moving parts, which distinguishes it emphatically from the electric refrigerator. In fact, so much importance has been placed on this characteristic of the gas-operated refrigerator that it has been reported that the electric companies are now endeavoring to develop an absorption refrigerator in which electricity will be used as a source of heat rather than as a source of power, as in the electric refrigerators of today.

Gas companies have, of course, not as yet had any experience in the merchandising of gas for refrigerating purposes. However, this should not occasion any great difficulty for the reason that gas refrigeration can yet be sold along the same general principles as gas house-heating. Furthermore, it must be mentioned that there is a great deal of novelty in the use of gas for refrigeration. The layman, in fact, cannot quite understand how gas, which is a fuel and which he has been accustomed to use for the production of heat, can be similarly used in the production of cold. This fact alone will serve to incite interest, and the interest once incited, and the customer properly informed as to how these machines work, there will be no real trouble in making sales.

Viewed from almost any angle, the gas refrigeration load is going to be a very advantageous one to the gas industry and one that will go far towards increasing the domestic consumption of gas. It is really idle to speculate as to how far this load can develop, for this is a rather unknown factor, but it does appear altogether likely that the use of gas in the home will be remarkably increased by its application to the production of cold. One thing must be emphasized in this connection and that is, that the consumption of gas in the refrigerator will be a constant one.

There has also been considerable speculation as to the use of refrigeration to cool the entire house. This is of course a very attractive proposition, but it is doubtful that any really practical application can be worked out under existing conditions anyway. However, just the very conception of house refrigeration with gas shows how extensive the field is and how far this load could be developed under the correct conditions.

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PUBLIC UTILITY SERVICE COSTS FAMILY ON AVERAGE ONLY SIX PER CENT OF INCOME

Only six per cent of the income of the average family in the United States is devoted to the purchase of all kinds of service from public utilities, reports the New Jersey Public Utility Information Committee.

Cost of utility services to the average family is estimated as follows: Steam railroads, 2 per cent; telephone, 1.26 per cent; gas, 1.08 per cent; electricity, 1.03 per cent; street cars, .42 per cent; and water, .21 per cent.

Other items in the family budget are estimated as follows: Food, 45 per cent; rent and taxes, 16 per cent; charities, entertainment, recreation and literature, 14 per cent; clothing, 12 per cent; and miscellaneous items, 7 per cent.

The items composing 94 per cent of the family expenses are those that have shown the greatest increase in cost in the past ten years, whereas the six per cent devoted to utility service shows either a decrease in cost or a very small increase in that time.

A reduction of fifty per cent in utility rates would make little difference in the family budget, but a reduction of even five per cent might easily make it impossible for the utilities to continue to give service.

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BUSINESS CONTINUES ON HIGH LEVEL

(Continued from page 523)

ties can as a rule be traced to some economic undercurrent; they have their origin most often in a matter materially affecting the pocketbooks of the voter.

Agricultural Discontent

Just now the country is faced by a severe agricultural discontent for which politics is frantically trying to find a remedy, if possible sufficiently soon in order to affect the course of the elections. As it is always in such cases these remedies are proposed on the spur of the moment without any real understanding of the economic problem itself. So we have seen Congress busy with a multitude of suggestions, none of which is likely to pass the considered judgment of the nation.

The farming community of this country represents territorially the largest buying unit of the United States. The economic life of this vast market is dependent almost entirely upon the well-being of the farmer, who controls absolutely its purchasing strength. Unsettled conditions in this section of the market cannot but produce a strong repercussion upon the rest of the American nation who is interested in supplying the merchandising needs of the farming communities.

After all is said, however, it seems that farmers, industrial producers and merchants alike are inclined to make rather light of this situation and not to lay much weight upon it.

Volume of Business Continues

The volume of business that has been unusually high during the summer has continued to be at the same high level during the early fall, allowing even for the natural acceleration of all commercial activities around this period of the year. From statistics supplied by the U. S. Government it appears that living cost has declined still further during the summer, which, in conjunction with the lower rates for almost all commodities, should have strengthened materially the spending power of the wage earner and salaried man. During the last year and the first part of the present much of the excess earnings of the middle class seems to have gone into real estate. Following the much-lamented Florida boom a real strong buying movement of home seekers has started in less speculative quarters and the further expansion of the "Pay your home by your rent" slogan has proved a powerful inducement to the back-to-the-lander in form of increased suburban settlements.

This development so far has produced two definite effects upon the economic life of the nation. One is a further mortgaging of the earnings of the small capitalists for a period of between ten and twenty years to pay for his home. The other is a shift of part of the purchasing strength of the city area to the suburban area.

Effect of Home Payments

The first cannot but produce a weakening of his purchasing power if ever a serious contraction of the national earning capacity during the period in question should arise. Such an eventuality, of course, is not very likely in the immediate future and, therefore, is of little concern just now. It is, however, a possibility which will have to be taken into consideration in estimating later economic developments and may play a very important part in the definite adjustment of the national credit situation likely to follow the present partial adjustment represented by the so-called farming crisis, discussed earlier in this report.

Shifting Purchasing Power

The second is of more pressing character because the shift in population is bound to have considerable bearing on retail distribution. Mail order houses have found already that the suburban and semi-suburban dweller may be made a most enthusiastic mail order fan. But the increase of mail order customers is small in comparison to the growth of retail trading in the suburban areas, which, of course, must bring about a corresponding decline in city business. Main Street is entering again definitely in competition with the Avenue, and the increase in the quality of Main Street purchases has its effect upon the industries supplying Main Street.

It has not taken long for manufacturers to realize that this new kind of Main Street business is a very desirable one to possess and, therefore, is well worth

(Continued on page 528)

INDUSTRIAL GAS LESSONS

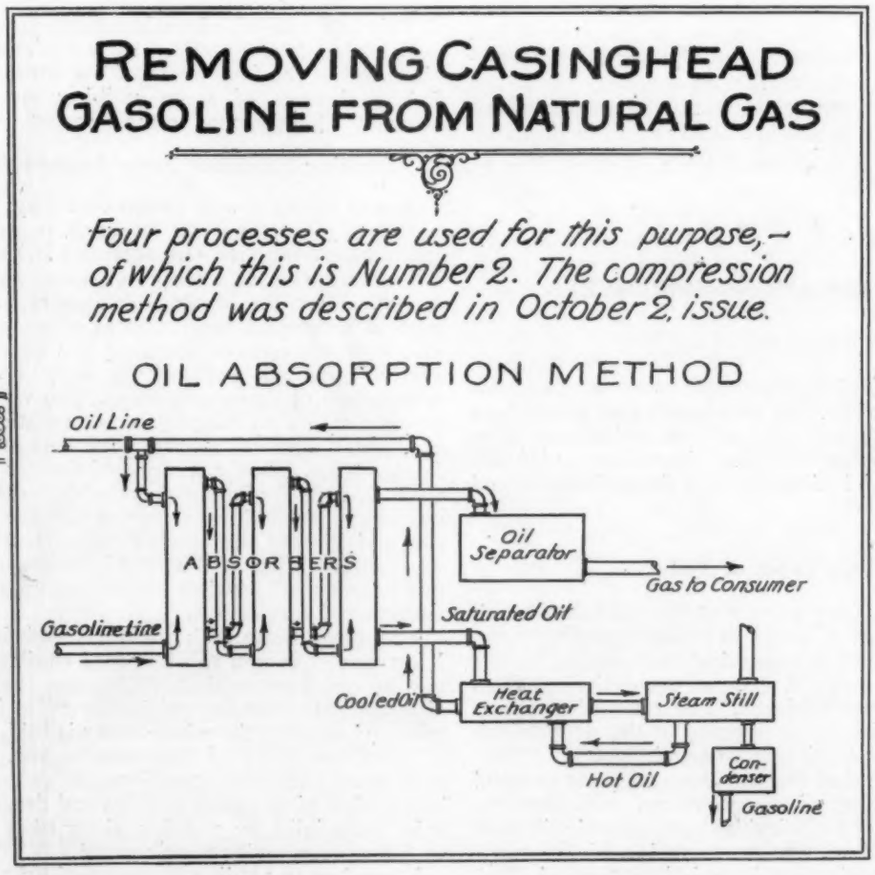
IF IT'S DONE WITH HEAT — YOU CAN DO IT BETTER WITH GAS

Lesson No. 140

Combustion

Oil Absorption

The second method of removing gasoline from casing-head gas is called the oil absorption process. This consists in making the casing-head gas pass through a straw oil, the result being that the gasoline is extracted from the gas and absorbed in the oil. This process is very much like the one that has been used for quite some time in the destructive distillation of coal for the recovery of the benzol and toluol contained in the gas made by this process. The absorption system is also employed in extracting gasoline from the gas that is produced when shale oil is distilled.



In the figure there is shown an illustration for absorbing the gasoline content of natural gas in a straw oil. The gasoline enters a series of absorbers and passes up these devices, which are made in the

form of packed towers, coming in contact with a counter-current stream of the oil. The gasoline is absorbed by the oil and the latter is pumped from the bottom of one tower to the top of another. The natural gas finally leaves the last tower in the series at the top and passes through an oil separator to the consumer. The separated oil leaves the last tower at the bottom and is made to pass through a heat exchanger. In this apparatus it absorbs some of the heat that is contained in the hot oil, and that is recovered from a steam still in which the gasoline has been removed. This partially-cooled oil is then pumped back and used over again for absorbing gasoline from new volumes of natural gas. The preheated, separated oil then goes to a steam-still where its gasoline content is removed, the gasoline being condensed and collected.

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(Continued from page 526)

the cost of its development. Salesmen that formerly were visiting big centres of retail trading only, in future will have to call on the larger suburban houses.

The increase in quality demand incidentally is not confined to suburban markets only, but is characteristic for the market situation as a whole. It is the result of the increasing contact between the small cities and the larger market centres and is probably the most important retail market development of the present season.

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EDUCATION AMONG EMPLOYEES

(Continued from page 524)

time he should earnestly impress upon them his views. They, in turn, can hold small group meetings dedicated to the same cause. Often an informal conference of employees with their immediate chief will prove more fruitful of result than the strictly formal meeting.

Two Types of Talks

I believe that there are two types of talks which should be included in employee meetings programs. First, policies which are peculiarly adapted to Utility Companies only; second, general theoretical policies which apply to any business. The rules of courtesy and fairness which mean success in the department store are equally applicable to our industry.

I firmly believe that the employee who has grasped the idealistic views of his company, will come to yearn for a greater technical knowledge and will seek it for himself. Here, the co-operation of the company in encouraging and assisting toward that knowledge can accomplish much good. For the smaller company, where it appears impractical to conduct classes for technical instruction, there are a number of reliable and successful agencies. Correspondence courses are always available and a generous attitude on the part of the company in bearing a part or all of the expense of such courses, will often influence the serious minded employee. We have at the present time several employees enrolled in the course provided by Columbia University on the Manufacture and Distribution of Gas.

Poster Service

Many of the poster services on the market prove a good means of reaching employees. This is particularly true of safety work. These posters are interestingly written and when placed on a conspicuous bulletin board are certain to attract attention.

In this connection it should be said that the best safety engineer is absolutely helpless without the complete co-operation of the management. Unless the management is willing to spend money in educating their men and women along safety lines and can impress upon employees the fact that the company is earnestly supporting this department, the safety engineer can not get results. We are very proud of the fact that records for the past year rate our company as one of the two lowest of all the companies insured by the Utilities Mutual.

This attitude of educating employees in company policies has been practised by our company for some time and in the four years of my connection with it, I have known of some striking examples of its success. There occurs to me a recent instance.

Striking Examples Show Success of Method

In one of the towns of our territory, while a huge excavating machine was at work, our four inch gas main which supplied one section of the town broke. An interruption of a couple of hours necessarily followed. After the break had been repaired, the girl who is employed in this local office made a quick check of the records showing gas customers in the section affected and getting busy on the phone, called each of these customers. She warned them to re-light pilots on ranges and automatic water heaters which had of course gone out when the gas failed. Now, I doubt if any real danger existed from these unlighted pilots and probably a majority of the customers would have detected the odor of escaping gas and located the trouble for themselves, but the unsolicited action of that girl in endeavoring to save our patrons all possible unpleasantness, was a real example of service.

I could continue with countless such instances, but I am sure that you too know of similar ones. They merely go to prove that willingness is a very potent ally and that once the spirit of service is instilled in men and women, the whole story is told.

There are many of you women, too, in executive and semi-executive positions with an extensive knowledge of company policies and dreams. You can help materially by passing along that information to the women under your control.

I recall once reading a report of an address made by Miss Dillon in which she described the distinguishing qualities of women as "Social, Practical and Utilitarian." I know of no field in which they can be used to better mutual advantage than in our own.

GAS MERCHANDISING

Domestic – Industrial

Ideas for the Man Who Sells

William H. Matlack

DON'T FAIL TO FOLLOW THROUGH

WHEN you plan a special sale do not neglect a single solitary detail. See that the store is made ready for the sale by special decorations; see that the window is trimmed, that neat signs are made for the trucks; see that your newspaper advertising and your direct advertising all tie into your special. Frequently just one of these factors will make or mar the success of the sale. In advertising it is always well to circulate the homes on your mains as well as to use newspaper advertising for there are a great many people living along your mains that do not receive the newspaper regularly.

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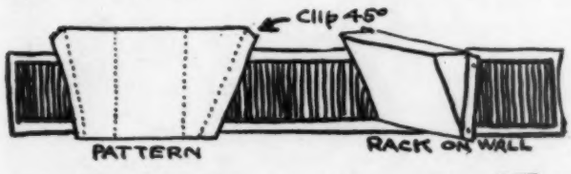
MAKE THIS RACK TO KEEP ADVERTISING IN

WE are offering a little suggestion to those who have not solved the problem of securing a convenient material rack for use in their stores.

Just how to care for folders, catalogs and booklets is often a problem for the gas man. Through lack of proper display and distribution thousands of dollars' worth of such material are wasted annually, and while many suggestions have been made for the care, display and distribution of such material we are of the opinion that this is a new idea.



This rack may be made in any gas shop and may be made to fit against the wall, to fit around a corner or post or may be built to rest on the counter.

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WHY NOT HIT HOME WHEN WRITING COPY

WHY not get away from cast iron, enameled legs and enameled phrases when writing gas appliance copy? Why not just talk to folks on the printed page like you do when you come into the store? Why not say:

Your Grandmother and the Days of Guess

In the days of guess grandma baked excellent bread, cakes and pies by knowing "just how long it took" and because she beat a path to the old range oven. You have seen her "testing with a straw," too; you have known her to remain "a-bakin' the live-long day," and often into the night when company was coming.

But grandma, were she baking today, would pursue no such pastime—Radio, bridge or the movie would claim her afternoons—grandma would demand the best—to secure results she would insist that her range have an oven heat regulator, or if you are advertising Hot Water Service, why not say:

Hot Water Service is an absolute necessity to the modern home. From grandma to Gertrude, the baby; from every member of the family there is a cry for hot water many times a day.

The Gasco Heater answers the call.

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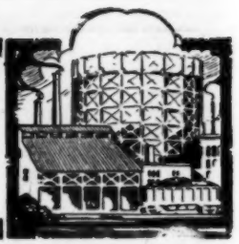
NEWS OF THE GAS INDUSTRY



Operation Division N. E. Gas Association Meet

Various Important Subjects Are Discussed at October Gathering

The meeting started with a dinner at six Friday evening and was followed by a session at eight that night and another from ten to twelve on Saturday morning. That having more frequent meetings of this division than has been the case in the past is advisable was indicated not only by the large attendance of some 150 from all parts of New England but also by the presence of some who are rarely seen at these meetings.

Directly after the dinner Sidney W. Ashe, Educational and Welfare Department, General Electric Co., Pittsfield, Mass., gave an illustrated talk on resuscitation.

Mr. I. T. Haddock, vice-president of the Cambridge Gas Light Co., opened the meeting and entertained a motion that Arthur Hall, superintendent of the Springfield Gas Co., be made chairman of the sessions, since the president and vice-president were unable to be present. The motion was carried.

Talk on Resuscitation

In his talk, Mr. Ashe explained the difference between the different kinds of cases requiring resuscitation. Electric shock, he said drives the blood to the head and the victim when recovering is likely to be very much wrought up and excited, often being in a fighting mood.

Gas requires a longer time to resuscitate and as in the case of either it is necessary to be very careful while the patient is coming out of the unconscious state. Drowning is different from gas and more like electric shock. Gas has a great affinity for oxygen in the blood and the patient has to be brought out quietly. Carbon monoxide having no odor to show its presence and automobile exhausts generating large quantities of it, together with the fact that it has a tremendous affinity for oxygen means that victims of this gas are hard to bring out. Even after being resuscitated many die of pneumonia afterwards.

In drowning the air supply is shut off and when the patient is coming out there is likely to be foaming at the mouth. This foam must be wiped off to give the patient greater freedom in breathing.

It is hard to say just how long resuscitation should be applied though an experienced person can tell by the color of the skin on the face turning blue and the increasing rigidity of the body when all hope is past. However, there are a number of cases where the patient has been brought out after being pronounced dead. It is well to work at least an hour and a half and in some cases a patient has been worked on for three hours before coming out of the effects.

Lantern Slides Illustrate Method

Mr. Ashe showed a number of lantern slides illustrating the method and showing diagrams that indicated just why the method is effective. He warned against taking the hands away from the ribs of the patient at any time because it takes time to get the hand in just the right position and also because when the hands are always in contact with the patient the first efforts to breathe are noticed and the motion of the resuscitator can then be brought into synchronism with the patient's breathing efforts, thus stimulating them rather than retarding them.

He advised trying resuscitation on all unconscious people regardless of the cause and stated that usually a patient was brought out of the unconscious state within fifteen or twenty minutes. He illustrated the method by showing with a man who acted the part of a patient just how it was done and closed his talk with a model made up of a bell jar in which cat's lungs were suspended, the lungs being connected to the outside air through a tube running through a cork at the top that admitted air to the inside of the lungs. Across the large opening of the bell jar was stretched a diaphragm and when this was pulled down the lungs expanded because of the inrush of air just as the lungs do in the body when the prone pressure method is applied.

Waste Heat Boilers

After Mr. Ashe's talk there was a short intermission during which the tables were cleared and removed and then the eight p. m. session began. At this meeting Mr. James Gloster read a paper on the "Waste Heat Boilers and Holder Heating Installation at Springfield." At this meeting also the new members were elected.

After a short discussion of this paper R. L. Fletcher of the Providence Gas Co., read a paper on Steam Accumulators. This was followed by a paper of discussion by S. B. DeCamp of the Smoot Engineering Corporation.

Purifying Ammonia

The next paper presented was by O. W. Adams, superintendent of the Brockton Gas Light Co., on the subject of purifying ammonia. This was followed by a paper of discussion by Mr. Ardenburg of Lowell.

This topic brought about more discussion than any other and there was a general agreement among those present that in the end a sulphate plant will have to be used on account of synthetic ammonia competition. However, there were many who felt that it was still too early to adopt the sulphate method.

House Heating

The meeting Saturday morning opened with a talk by E. L. Woods, of the Springfield Gas Light Com-

pany, in which he outlined the experiences of that company with house heating. This was followed by many questions in regard to radiator valves and trouble with return pipes. It being brought out in this meeting that great care is required to make sure the installation is properly installed.

The last paper of the meeting was on the Springfield Distribution System and was read by Mr. Fred F. Faulstich. The discussion on this paper centered around joints and whether a house or a pit should be provided for district governors. It seemed the consensus of opinion that wherever it is practical a house is preferable.

During the afternoon a large number of those present visited the plant of the Springfield Gas Light Co., and the distribution department of that company.

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Factory Cafeterias Use Gas in Their Kitchens

Florence, Mass.—The Pro-phylactic Brush Co. of Florence, Mass., is now using gas for preparing meals for 400 employees every noon. A 3 section hotel range, 1 salamander broiler and 2 gas heated coffee urns replace the 2 coal ranges. The Nonotuck Silk Co., maker of high grade silk, has recently installed a cafeteria for their employees and gas equipment has been installed throughout. The management is very well pleased with the results of using gas for this purpose.

* * *

No. Indiana Purchase Approval Asked

Indianapolis, Ind.—Authority for the purchase of two public utilities in northern Indiana, valued at $1,497,090, by the Northern Indiana Public Service Company, was requested in a petition filed with the public service commission. The two concerns which the northern Indiana company, an Insull concern, proposes to take over are the Peru Gas Company and the Indiana Gas Transportation Company.

The company asks authority to issue $700,000 par value, 6 per cent preferred stock at not less than 86 per cent of par; and 89,509 shares of common stock without par value to be sold at not less than $10 a share. It also asks the commission to make an investigation for the purpose of finding and determining the values of the properties as of August 1, before authorizing the purchase. The value of the individual properties have been fixed at $438,767 for the Peru Gas Company and $1,058,325 for the Indiana Gas Transportation Company.

* * *

Okla. Northern Utilities Co. Buys Plants

Ponca City, Okla.—An announcement has been made from the local office of the Oklahoma Northern Utilities Company of the purchase of the Garber Gas and Fuel Company and of the Hoy Oil and Gas Company of Medford. The consideration was not made public.

The new owners will assume control immediately and plan to institute the same standards of service that mark their operations in other localities. The company owns and operates gas distribution systems at Blackwell, Tonkawa, Hominy and Cushring in addition to the recent purchases.

Empire State Gas Men Meet

Hold Annual Convention at Lake Placid

The president called the meeting to order at 10 o'clock Monday, October 4th, and invited the vice-president, Mr. Brundage, to take the chair during the presentation of the president's address. On conclusion of the address it was voted that there be a rising vote of thanks to the president and the officers for their conduct of the association's affairs during the preceding year.

Reports by the treasurer and the auditing committee were presented and on motion duly seconded and carried, were ordered received and filed.

The secretary presented his report which, on motion duly seconded and carried was ordered received and filed.

In the absence of Mr. Corey, C. A. Volz read a report from the committee on Highway Lighting, and Mr. Charles S. Ruffner read a report from the Farm Service Policy committee, both of which on motion duly seconded, were referred to the executive committee.

Selecting and Training Utility Employees

Samuel S. Board, director of the Yale Graduate Placement Bureau, delivered an address on the Selection and Training of Utility Company Employees. On motion duly seconded a vote of thanks was extended to Mr. Board for his interesting talk.

The chairman read a telegram from Commissioner George R. VanNamee telling of his inability to be present and asking that his regrets be presented to the meeting. On motion duly seconded it was voted that the secretary be instructed to wire Commissioner VanNamee expressing the disappointment of the meeting and the hopes of those present for his speedy recovery. In the absence of Commissioner VanNamee, Mr. Charles R. Vanneman, chief engineer of the Public Service Commission, spoke extemperaneously. A vot of thanks was extended to Mr. Vanneman for substituting for the Commissioner at the last moment and for his very interesting address.

Second Session

The second session of the meeting was called to order at 9:45 on Tuesday, October 5th. Mr. N. S. Sloan presented a report for the New York State Committee on Public Utility Information. On motion duly seconded, it was voted that the report be received and filed and that the meeting recommend that the report be printed and distributed.

An interesting address was delivered by Dr. Theodore J. Grayson, director of Evening School of Accounts and Finance, University of Pennsylvania, on Management Problems of the Holding Company. A rising vote of thanks was extended to Dr. Grayson.

Miss Helen Smith, Lighting Engineer of the Rochester Gas and Electric Corporation, spoke in a humorous vein on behalf of the

women's section of the association. Miss Smith's talk was much appreciated by all those present and a hearty vote of thanks was extended to her.

The last speaker on the program was the Right Reverend David Lincoln Ferris, Chief Coadjutor of Western New York. On motion duly seconded a rising vote of thanks was extended to Bishop Ferris for coming to the meeting and for his splendid address.

New Officers

In the absence of Mr. Huntley the secretary read the following report from the Nominating Committee:

"The Nominating Committee appointed in accordance with a resolution adopted by the Executive Committee at its meeting on May 28th, after careful consideration, submits the following nominations to be voted on at the annual meeting of the association. October 5th, 1926.

For officers for the ensuing year: H. M. Brundage, president; H. C. Palmer, first vice-president; C. S. Ruffner, second vice-president; W. J. Welsh, treasurer.

For members of Executive Committee to serve until annual meeting 1929.

S. G. Rhodes, A. H. Schoellkopf, F. B. Steele, F. A. Stoughton.

For members of executive committee to serve until meeting 1927 filling vacancy caused by election of C. S. Ruffner as vice-president: E. C. Scobell.

On motion duly seconded, it was voted that the report be received and that the secretary be instructed to cast one ballot for all those nominated for officers and members of the executive committee. The secretary cast such ballot and announced the election of those nominated. Mr. Brundage was escorted to the chair and expressed his appreciation of the honor conferred upon him and his hope for continued cooperation on the part of all the members of the association.

Under head of new business, it was moved, seconded and carried that a vote of thanks be extended to the Lake Placid Club, for the many courtesies extended to the association during its stay at the club.

Mr. Brundage then called upon Bishop Ferris to pronounce a benediction after which the meeting adjourned.

The Baseball Trophy

Brooklyn Union Gas Men Hold Dinner

Medals Awarded to Twenty-five Year Service Men

Brooklyn, N. Y.—Men who have rendered faithful service in the Brooklyn Union Gas Company system for upward of twenty-five years, were awarded service emblems on the evening of October 21, at the auditorium of the Knights of Columbus Building, Prospect Park Plaza, Brooklyn.

Clifford E. Paige, vice-president of the Brooklyn Union Gas Company, presided at this ceremony. He introduced Arthur S. Somers, president of the Long Island Chamber of Commerce, who addressed the employees of the company. The medals were presented by Arthur F. Staniford, vice-president of the company.

The presentation of the medals was preceded by a dinner, at which the honor men were guests. The honored guests at this dinner were those who have been with the company more than fifty years, and who are: Frank J. McIntyre, 61 years; Edward J. Byrne, 54 years; Edward R. DuCret, 53 years; Patrick McIntyre, 52 years; Thomas F. Roach, 52 years; Bartholomew F. Kotchie, 52 years; James Clarke, 52 years; Michael Shay, 51 years.

Medal Recipients

Those who received medals and their years of service were: 25 years: August Bahlinger, William Baumgardt, Conrad Botsch, Elmer Butler, Joseph Capasso, C. C. Chichester, William Connelly, Michael Cardillo, George L. Fraga, Jacob Gabel, Walter Galpine, Henry E. Jones, Valentine Kennedy, Henry J. Koorbusch, William L. Kubat, William C. Lane, William Libby, Charles McCormick, James A. McAvey, Edward J. Mone, Vincenzo Monaco, Jeremiah L. Shine, Frank S. Snell, John J. Snyder, Sr., William O. Stewart, Frederick A. Wilson. 30 years: Richard P. Barry, Antonio Camporese, Henry Deegan, Patrick Devaney, Joseph R. Garvey, Paul Jacoby, John D. Jennings, Michael J. Kane, John J. Kennedy, William Lean, Edward J. Murtagh, Timothy McAuliffe, Michael J. McNamara, William F. Reardon, Bernard Ryan, William C. Sickles, John O. Stagg, Patrick Thornton, William Thorpe, Louis J. Zipfel. 35 years: Fred Baumgardt, John Boyce, John J. Finnegan, John D. Howland, John H. Higgins, Sr., William J. Jamison, Thomas F. Kennedy, John A. Logan, Michael McGrath, Luigi Russo, Michael J. Sheerin. 40 years: Antonio Esposito, Edward J. Harrington, Emanuel J. Kubat, George F. Mullen, William F. Peterson. 45 years: John S. Averill, John Cannon, Alexander Hamilton, Edward Logan, Frank T. Nolan, John Sloan, Arthur F. Staniford, Alfred J. Young. 50 years: Warren S. Archer, John Etherson, Henry Sporing.

Baseball Trophy Presented

At the same time, the baseball trophy donated by James H. Jourdan, president of the Brooklyn Union Gas Company, was presented to the Williamsburgh branch team, champions of the gas company league. The members of this team are: Joseph Cooper, Frank Tennant, William Powers, Patrick F. Juliano, Anthony Otsky, William O'Connor, Frank H. Tallet, Walter Houschel, James McDonald, Joseph Wagner, Albert Williams, Bernard Freedman, James E. Fisher, Michael Cameron, Charles Marks, Harry LeCast, Joseph Walsh.

At the conclusion of the presentation ceremonies, music for dancing was provided by the A. & P. Gypsies.

* * *

G. E. Benson, Pacific Coast Gas Man Passes Away

San Pedro, Calif.—Geo. E. Benson, commercial agent for the San Pedro District of the Southern Counties Gas Company for several years, died suddenly at his home in San Pedro on Monday, September 20th. His death came as a great shock to his fellow employees and to his many friends in San Pedro and throughout Southern California.

Benson was born in Denver, Colorado, on October 6, 1883. As a young man he became indentified with the sales organization of the Denver Gas & Electric Company. His ability as an industrial salesman may be attributed largely to his training under this Doherty organization.

On March 1st, 1922, joined the forces of the Southern Counties Gas Company at Whittier, California, as an appliance salesman. A short time later he was transferred to San Pedro district under O. R. C. Grow, district manager of that division. Here Benson's ability as a sales engineer and an expert in the installation of industrial burners, quickly became recognized. He was instrumental in installing gas in many of the larger industrial plants throughout the San Pedro Harbor district.

Three years ago he was placed in charge of the sales and commercial organization of the company at San Pedro with the title of commercial agent, a position which he ably filled until his death. A man of splendid personality and well grounded in the commercial end of the business, Benson won for himself and his organization, many friends throughout the San Pedro district.

* * *

Whitwell Appointed Head of Equitable Gas Company

Chicago. Ill.—George E. Whitwell, formerly in charge of commercial development work in the gas department of Byllesby Engineering and Management Corporation, was appointed recently general manager of the Equitable Gas Company of Pittsburgh, a subsidiary of the Philadelphia Company, upon the promotion of E. D. Leland to assistant to the vice-president of the company.

Mr. Whitwell is well known in the gas industry as one of the inventors of the Young-Whitwell back run carburetted water gas process, a development now used by over 300 manufactured gas concerns in the United States and Europe. This process was developed while he was acting as consulting engineer of the Tacoma Gas and Fuel Company, a division of the Byllesby-managed Mountain States Power Company. He was born in Washington, D. C., in 1892. Following his preparatory education he entered Massachusetts Institute of Technology, where he graduated in 1915 with a degree of bachelor of science in electrochemistry. He then became research engineer of the Anaconda Copper Company of Montana, which position he held until he entered the army and served as an aviator in the photographic section of the aviation corps in France. Upon his discharge from the army in 1919 he taught for three years in the University of Washington, at the same time acting as consulting engineer of the Tacoma Gas and Fuel Company.

Mr. Leland began his career as a machinist in the Norwalk Iron Works, South Norwalk, Connecticut, and in 1884 became engineer for that concern. He later served as chief engineer of the Pneumatic Dynamite Gun Company at Fort Lafayette, New York. Some of his notable machine construction work includes the building of the first high pressure gas compressing station and the first ammonia refrigerating dehydration plant to extract gasoline from natural gas. He has been with the Equitable Gas Company since 1904, coming to Pittsburgh as superintendent of compressing stations.

Public Service Corp. of Jersey Votes Split-up

Proposes Preferred Stock Be Doubled and Common Be Increased 5 Times With 3 for 1 Distribution

New York City.—Directors of the Public Service Corporation of New Jersey voted to recommend an increase in preferred stock from $100,000,000 to $200,000,000; an increase in no par value common stock from 2,000,000 shares to 10,000,000 shares; and a split-up of the no par common outstanding on a basis of 3 for 1. Under this plan the holders of the outstanding 1,192,425 shares will become owners of 3,577,275 shares, leaving 6,422,725 shares available for future use, none of which will be offered for subscription at the present.

The board also recommended that dividends on the 6 per cent cumulative preferred stock of the corporation be paid monthly instead of quarterly as at present. To become effective the recommendations must receive a two-thirds vote of the stockholders and the board called a meeting of stockholders to be held in Newark, October 19, for the purpose of considering its proposal.

Thomas N. McCarter, president, in discussing the action of the board said: "The recommendations are in the interest of more economical financing and a wider distribution of stock holdings among the public. The remarkable industrial and residential development of

New Jersey during the past years bids fair to continue indefinitely, and has made and is making necessary almost continuous expansion of plant and equipment by public service utility companies. This expansion has been largely financed through the sale of junior securities, resulting in an improved financial structure, and it is expected that much of the necessary future new capital will be secured through the sale of our 6 per cent cumulative preferred. At the same time, because of favorable result of operation, common stock of the corporation is coming into favor as an investment security, and through lower selling price resulting from the splitting of this stock it will undoubtedly be made more attractive to the investors of moderate means.

"At the proper time I shall recommend to the board that the new stock be placed upon a $2 a year dividend basis."

* * *

Westmoreland Coal Co. Moves Office

Philadelphia, Pa.—On November 1st, 1926, the office of the Westmoreland Coal Co. will be moved to the Lewis Building, N. E. corner, 15th and Locust streets, Philadelphia, Pa., where the company will occupy the entire 10th floor.

* * *

Public Service Company Gets Gas Company Franchise

Ft. Collier, Colo.—A resolution consenting to the assignment of the franchise of the Poudre Valley Gas Company to the Public Service Corporation of Colorado has been adopted by the city council. The gas company recently transferred its holdings here to the larger company.

Transfer of the franchise was asked in a communication from Paul W. Lee, vice-president of the gas company. By the assignment no other rights are given the Public Service Company than were possessed under the franchise by the Poudre Valley Gas Company.

* * *

Key City Gas Company to Improve Plant

Dubuque, Ia.—A permit for the rebuilding of the retort house at the Key City Gas Company's plant on East Eleventh Street, has been issued.

Pennsylvania Gas Meeting at Norristown

Harrisburg, Pa.—George L. Cullen, secretary-treasurer of the Pennsylvania Gas Association, announces the mid-year meeting of the Pennsylvania Gas Association, to be at the Valley Forge Hotel, Norristown, Pa., December 6th, 1926.

There will be a council dinner meeting, together with the chairmen of the various committees, at the same hotel the night before the mid-year meeting, at 7 p. m.

The appointment of the following committees assures a most successful meeting:

Papers and Program Committee: Wallace G. Murfit, chairman, Newtown, Pa.; H. S. Bair, York, Pa.; F. M. Baty, Easton, Pa.; W. H. German, Harrisburg, Pa.; W. G. Sterrett, Chester, Pa.

Mid-Year Meeting Committee: E. G. Boyer, chairman, Norristown, Pa.; E. W. Fox, Norristown, Pa.; M. N. Bailey, 1513 Race street, Philadelphia, Pa.

Gas & Coke Securities Co. Formed

Organized to Control New Haven Gas Light Co.—Directors Include Two Hartford Men

New Haven, Conn.—Organization of the Connecticut Gas and Coke Securities Company, which will control the New Haven Gas Light Company, in New Haven, has been effected. Stockholders elected the following directors: Clarence Blakeslee, New Haven; John J. McKeon, New Haven; William H. Putnam, Hartford; Edward M. Day, Hartford; Hugh F. Smith, Pittsburgh; Harold Doolittle, Pittsburgh, and Donald MacArthur, Glen Ridge, N. J.

The directors met subsequently and elected the following officers: President, Donald MacArthur, of Glen Ridge, N. J.; vice-president, Hugh F. Smith, of Pittsburgh; treasurer, S. T. Brown, of Pittsburgh, and secretary, Douglas Gott, of Pittsburgh.

Mr. Smith presided at the meeting of the stockholders and Mr. Day, general counsel for the company, was the clerk.

The Connecticut Gas and Coke Securities Company begins business with 200,000 shares of common stock without par value subscribed for and the amount paid in represented by property is $2,200,000.

The Koppers Company, of Pittsburgh, is the principal owner of the common shares of the Connecticut Gas and Coke Securities Company.

The principal office of the company will be at No. 80 Crown street, New Haven, which is also the office of the New Haven Gas Light Company.

The New Haven Gas Light Company will continue to be officered as at present. At this time more than 150,000 shares of stock of the New Haven Gas Light Company have been deposited in accordance with the plan for the passing of control to the new owners. There are 200,000 shares in the New Haven Gas Light Company, so that three-quarters of the issue has been deposited.

The Union and New Haven Trust Company, of New Haven, has been appointed transfer agent for the Connecticut Gas and Coke Securities Company.

* * *

S. S. Jordan Made Chamber of Commerce Manager

Cincinnatti, O.—Sidney S. Jordan, manager of the industrial development department of the Columbia Gas Company, has been named to be manager of the industrial development department of the Chamber of Commerce.

The new manager of the industrial development department of the Chamber of Commerce is a graduate of Harvard and Columbia Universities and had a large part in the recent industrial survey of the resources of the Ohio Valley states made through donations of the Commercial Club as a contribution to the University of Cincinnatti.

Since the opening of the large tract adjoining the mammoth power plant of the Columbia Gas and Electric Company at old Ft. Miami, Mr. Jordan has been manager of the Columbia Industrial Company, a subsidiary of the Columbia Gas.